

27. The polynucleotide of Claim 24 wherein the polynucleotide encodes a polypeptide selected from the group consisting of SEQ ID NOs: 2, 4, 6, 8, 10, 12 and 14.
28. An isolated complement of the polynucleotide of Claim 24, wherein (a) the complement and the polynucleotide consist of the same number of nucleotides, and (b) the nucleotide sequences of the complement and the polynucleotide have 100% complementarity.
29. An isolated nucleic acid molecule that remains hybridized with the isolated polynucleotide of Claim 24 under a wash condition of 0.1X SSC, 0.1% SDS, and 65°C.
30. A cell or a virus comprising the polynucleotide of Claim 24.
31. The cell of Claim 30, wherein the cell is selected from the group consisting of a yeast cell, a bacterial cell, an insect cell, and a plant cell.
32. A transgenic plant comprising the polynucleotide of Claim 24.
33. A method for transforming a cell comprising introducing into a cell the polynucleotide of Claim 24.
34. A method for producing a transgenic plant comprising (a) transforming a plant cell with the polynucleotide of Claim 24, and (b) regenerating a plant from the transformed plant cell.
35. An isolated histidine biosynthetic enzyme polypeptide having a sequence identity of at least 95% based on the Clustal method compared to an amino acid sequence selected from the group consisting of SEQ ID NOs: 2, 4, 6, 8, 10, 12 and 14.
36. The isolated polypeptide of Claim 35 wherein the sequence identity is at least 90%.
37. The isolated polypeptide of Claim 35 wherein the sequence identity is at least 95%.
38. The polypeptide of Claim 35 wherein the polypeptide has a sequence selected from the group consisting of SEQ ID NOs: 2, 4, 6, 8, 10, 12 and 14.
39. A chimeric gene comprising the polynucleotide of Claim 24 operably linked to at least one suitable regulatory sequence.

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